XM-504Z

SERVICE MANUAL

Ver 1.0 2004. 01

US Model
Canadian Model
AEP Model
UK Model
E Model

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

50 watts per channel minimum continuous average power into 4 ohms, both channels driven from 20 Hz to 20 kHz with no more than 0.04% total harmonic distortion per Car Audio Ad Hoc Committee standards.

Other Specifications

Circuit system	OTL (output transformerless) circuit
	Pulse power supply
Inputs	RCA pin jacks
	High level input connector
Input level adjustment range	
	0.3 – 6 V (RCA pin jacks),
	0.6 – 12 V (High level input)
Outputs	Speaker terminals
Speaker impedance	2 – 8 Ω (stereo)
	4 – 8 Ω (when used as a bridging amplifier)
Maximum outputs	Four speakers: 100 W × 4 (at 4 Ω)
	Three speakers: 100 W × 2 + 250 W × 1 (at 4 Ω)
Rated outputs (supply voltage at 14.4 V)	
	Four speakers:
	50 W × 4 (20 Hz – 20 kHz, 0.04% THD, at 4 Ω)
	60 W × 4 (20 Hz – 20 kHz, 0.1% THD, at 2 Ω)
Frequency response	5 Hz – 80 kHz ($^{+0}_{-3}$ dB)
Harmonic distortion	0.005% or less (at 1 kHz, 4 Ω, 10 W)
Low-pass filter	80 Hz, –18 dB/oct
High-pass filter	80 Hz, –12 dB/oct
Power requirements	12 V DC car battery (negative ground)
Power supply voltage	10.5 – 16 V
Current drain	at rated output : 30 A (4 Ω, 50 W × 4)
	Remote input : 1 mA
Dimensions	Approx. 350 × 55 × 233 mm
	(13 7/8 × 2 1/4 × 9 1/4 in.) (w/h/d)
	not incl. projecting parts and controls
Mass	Approx. 3.1 kg (6 lb. 14 oz.) not incl. accessories
Supplied accessories	Mounting screws (4)
	High level input cord (1)
	Protection cap (1)

Design and specifications are subject to change without notice.

STEREO POWER AMPLIFIER

9-877-562-01
2004A04-1
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Sony Corporation
e Vehicle Company
Published by Sony Engineering Corporation

SONY®

PROTECTOR OPERATION CHECK

Thermal Protect

1. Short across TH901 with the power on.
2. Verify that the protector is operated and LED901 illuminates red.
3. Verify that the protector is released and LED901 illuminates green when the short is removed.
4. Likewise, perform items 1 to 3 for TH902 and TH903.

Over Current Protect

1. Short between the positive and negative sides of the speaker output terminal CN903 and CN904 (1/2) with the power on.
   (Perform this shorting for each channel on FRONT and REAR.)
2. Verify that the protector is operated and LED901 illuminates red.
3. Verify that the protector is not released and LED901 remains red even when the short is removed.
4. Verify that the protector is released and LED901 illuminates green when the power is turned off and then on again.

Offset Protect

1. Short between the +12V terminal of CN904 (2/2) and the BTL+ or BTL– of the speaker output terminal CN903 and CN904 (1/2).
   (Short between +12V terminal and BTL+ and between +12V terminal and BTL–.)
2. Verify that the protector is operated and LED901 illuminates red.
3. Verify that the protector is not released and LED901 remains red even when the short is removed.
4. Verify that the protector is released and LED901 illuminates green when the power is turned off and then on again.

TABLE OF CONTENTS

1. GENERAL
Connections 3

2. DISASSEMBLY
2-1. Bottom Plate 5
2-2. Main Board Section 6
2-3. Main Board 6

3. DIAGRAMS
3-1. IC Block Diagram 7
3-2. Printed Wiring Board 8
3-3. Schematic Diagram –Amp Section– 9
3-4. Schematic Diagram –Power Section– 10

4. EXPLODED VIEWS
4-1. Heat Sink (Main) Section 11
4-2. Main Board Section 12

5. ELECTRICAL PARTS LIST 13

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual.

Connections

Precautions

- This unit is designed for negative ground 12 V DC operation only.
- Use speakers with an impedance of 2 to 8 Ω (4 to 8 Ω when used as a bridging amplifier).
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers.
- Avoid installing the unit in areas subject to:
  - — high temperatures such as from direct sunlight or hot air from the heater
  - — rain or moisture
  - — dust or dirt.
- If your car is parked in direct sunlight and there is a considerable rise in temperature inside the car, allow the unit to cool down before use.
- When installing the unit horizontally, be sure not to cover the fins with the floor carpet etc.
- If this unit is placed too close to the car radio or antenna, interference may occur. In this case, relocate the amplifier away from the car radio or antenna.
- If no power is being supplied to the master unit, check the connections.
- This power amplifier employs a protection circuit to protect the transistors and speakers if the amplifier malfunctions. Do not attempt to test the protection circuits by covering the heat sink or connecting improper loads.
- Do not use the unit on a weak battery as its optimum performance depends on a good power supply.
- For safety reasons, keep your car audio volume moderate so that you can still hear sounds outside your car.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

Caution

- Before making any connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Be sure to use speakers with an adequate power rating. If you use small capacity speakers, they may be damaged.
- Do not connect the ⊖ terminal of the speaker system to the car chassis, and do not connect the ⊖ terminal of the right speaker with that of the left speaker.
- Install the input and output cords away from the power supply wire as running them close together can generate some interference noise.
- This unit is a high powered amplifier. Therefore, it may not perform to its full potential if used with the speaker cords supplied with the car.
- If your car is equipped with a computer system for navigation or some other purpose, do not remove the ground wire from the car battery. If you disconnect the wire, the computer memory may be erased. To avoid short circuits when making connections, disconnect the +12 V power supply wire until all the other wires have been connected.

Conexiones

Precauciones

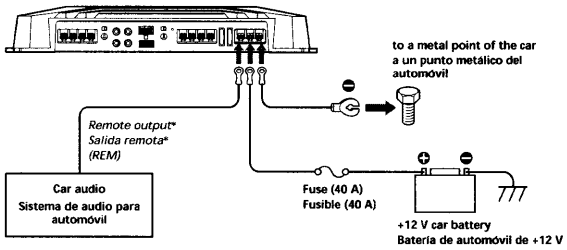
- Esta unidad está diseñada para utilizarse sólo con cc de 12 V negativo a masa.
- Emplee altavoces con impedancia de 2 a 8 Ω (de 4 a 8 Ω cuando se utilice como amplificador en puente).
- No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoz de la unidad, ya que puede dañar dichos altavoces.
- Evite instalar la unidad en lugares expuestos a:
  - — altas temperaturas, como a la luz solar directa o al aire caliente de la calefacción
  - — la lluvia o la humedad
  - — suciedad o polvo.
- Si aparca el automóvil bajo la luz solar directa y se produce un considerable aumento de temperatura en el interior, deje que la unidad se enfríe antes de utilizarla.
- Si instala la unidad horizontalmente, asegúrese de no cubrir las aletas con la moqueta del suelo, etc.
- Si coloca la unidad demasiado cerca de la radio o antena del automóvil, pueden producirse interferencias. En este caso, aleje el amplificador de dicha radio o antena.
- Si la unidad principal no recibe alimentación, compruebe las conexiones.
- Este amplificador de potencia emplea un circuito de protección para proteger los transistores y los altavoces en caso de que dicho amplificador presente fallos de funcionamiento. No intente someter a prueba los circuitos de protección cubriendo el disipador de calor o conectando cargas inadecuadas.
- No utilice la unidad si la batería se está agotando, ya que el rendimiento óptimo de dicha unidad depende de un buen suministro de alimentación.
- Por razones de seguridad, mantenga el volumen del sistema de audio en un nivel moderado de forma que sea posible oír los sonidos del exterior del automóvil.

Si desea realizar alguna consulta o solucionar algún problema relativos a la unidad que no aparezcan en este manual, póngase en contacto con el distribuidor Sony más próximo.

Precaución

- Antes de realizar las conexiones, desconecte el terminal de toma a tierra de la batería del automóvil para evitar cortocircuitos.
- Asegúrese de utilizar altavoces con una potencia nominal adecuada. Si emplea altavoces de pequeña capacidad, pueden dañarse.
- No conecte el terminal ⊖ del sistema de altavoces al chasis del automóvil, ni el terminal ⊖ del altavoz derecho al del altavoz izquierdo.
- Instale los cables de entrada y salida alejados del cable de suministro de alimentación, ya que en caso contrario puede generarse ruido por interferencias.
- Esta unidad es un amplificador de alta potencia. Por tanto, puede no funcionar a pleno rendimiento si se utiliza con los cables de altavoz suministrados con el automóvil.
- Si el automóvil está equipado con un sistema de ordenador para la navegación o para otra finalidad, no desconecte el conductor de toma a tierra de la batería del automóvil. Si lo desconecta, la memoria del ordenador puede borrarse. Para evitar cortocircuitos al realizar las conexiones, desconecte el cable de suministro de alimentación de +12 V hasta conectar todos los cables.

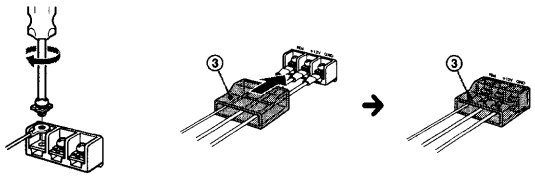
Power Connection Wires (not supplied)
Cables de conexión de alimentación (no suministrados)



* *If you have the factory original or some other car audio without a remote output on the amplifier, connect the remote input terminal (REMOTE) to the accessory power supply.*

* *Si dispone del sistema de audio para automóvil original de fábrica o de otro sistema sin una salida remota en el amplificador, conecte el terminal de entrada remota (REMOTE) al suministro de alimentación accesoria.*

Make the terminal connections as illustrated below.
Realice las conexiones de terminal como se ilustra a continuación.



Pass the wires through the cap, connect the wires, then cover the terminals with the cap.

Note
When you tighten the screw, be careful not to apply too much torque as doing so may damage the screw.*
** The torque value should be less than 1 N•m.*

Pase los cables a través de la cubierta, conéctelos y cubra los terminales con dicha cubierta.

Nota
Al apretar el tornillo, tenga cuidado de no aplicar demasiada fuerza de torsión, ya que puede dañarlo.*
** El valor de fuerza de torsión debe ser inferior a 1 N•m.*

Notes on the power supply
- *Connect the +12 V power supply wire only after all the other wires have been connected.*
- ***Be sure to connect the ground wire of the unit securely to a metal point of the car. A loose connection may cause a malfunction of the amplifier.***
- *Be sure to connect the remote control wire of the car audio to the remote terminal.*
- *When using a car audio without a remote output on the amplifier, connect the remote input terminal (REMOTE) to the accessory power supply.*
- *Use a power supply wire with a fuse attached (40 A).*
- *Place the fuse in the power supply wire as close as possible to the car battery.*
- *During full-power operation, a current of more than 40 A will run through the system. Therefore, make sure that the wires to be connected to the **+12 V** and **GND** terminals of this unit are larger than 10-Gauge (AWG-10) or have a sectional area of more than 5 mm².*

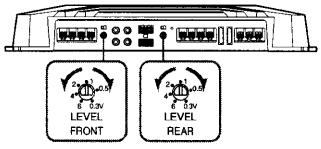
Notas sobre el suministro de alimentación
- *Conecte el cable de suministro de +12 V sólo después de haber conectado los otros cables.*
- ***Asegúrese de conectar firmemente el cable de toma a tierra de la unidad a un punto metálico del automóvil. Una conexión floja puede causar fallos de funcionamiento del amplificador.***
- *Compruebe que conecta el cable de control remoto del sistema de audio al terminal remoto.*
- *Si utiliza un sistema de audio sin salida remota en el amplificador, conecte el terminal de entrada remota (REMOTE) al suministro de alimentación accesoria.*
- *Emplee el cable de suministro de alimentación con un fusible fijado (40 A).*
- *Coloque el fusible en el cable de suministro de alimentación lo más cerca posible de la batería del automóvil.*
- *Durante el funcionamiento a pleno rendimiento, fluye por el sistema una corriente superior a 40 A. Por tanto, compruebe que los cables que va a conectar a los terminales de **+12 V** y **GND** de esta unidad tengan una capacidad superior a 10-Gauge (AWG-10) una zona de sección superior a 5 mm².*

Level Adjustment Control

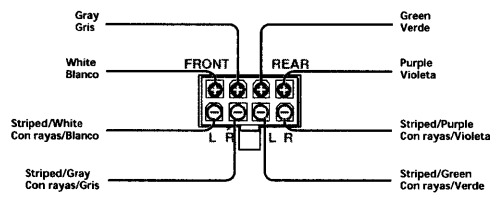
The input level can be adjusted with this control when using source equipment made by other manufacturers. Turn it in the clockwise direction when the output level of the car audio seems low.

Control de ajuste de nivel

Es posible ajustar el nivel de entrada con este control al utilizar equipos fuente de otros fabricantes. Gírelo en el sentido de las agujas del reloj si el nivel de salida del sistema de audio para automóvil parece bajo.



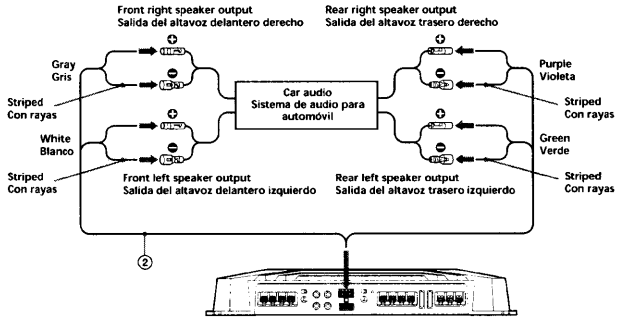
High Level Input Connector
Conector de entrada de alto nivel



Input Connections

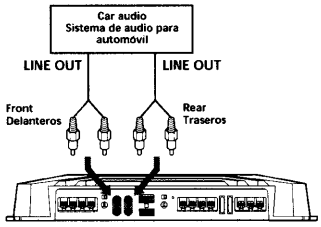
High Level Input Connection (with Speaker Connection 1, 2 or 4)
Conexión de entrada de alto nivel (con conexión de altavoces 1, 2 o 4)

A



Line Input Connection (with Speaker Connection 1, 2 or 4)
Conexión de entrada de línea (con conexión de altavoces 1, 2 o 4)

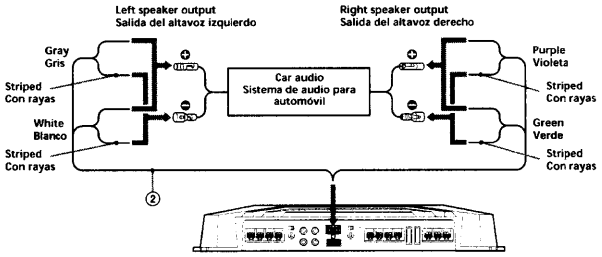
C



Conexiones de entrada

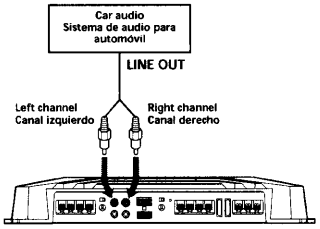
High Level Input Connection (with Speaker Connection 3)
Conexión de entrada de alto nivel (con conexión de altavoces 3)

B



Line Input Connection (with Speaker Connection 3)
Conexión de entrada de línea (con conexión de altavoces 3)

D



Note
Make sure that the line output from the car audio is connected to the jack marked "L (BTL)" on the unit.

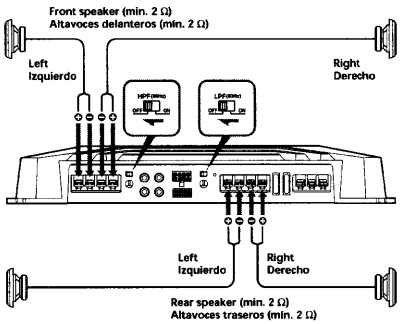
Nota
Compruebe que la salida de línea del sistema de audio está conectada a la toma con la marca "L (BTL)" de la unidad.

Speaker Connections

Turn on or off the LPF and HPF switch at the unit rear as illustrated below.

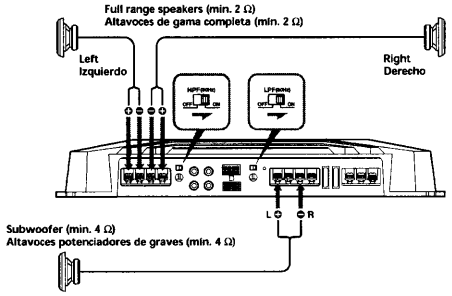
4-Speaker System (with Input Connection A or C)
Sistema de 4 altavoces (con conexión de entrada A o C)

1



3-Speaker System (with Input Connection A or C)
Sistema de 3 altavoces (con conexión de entrada A o C)

2

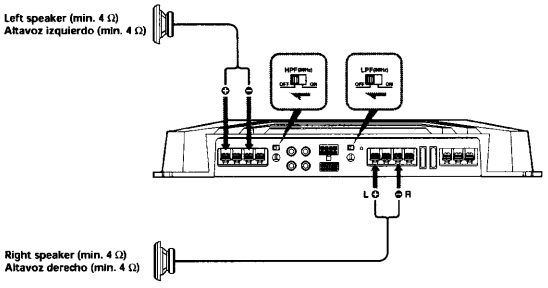


Notes
- *In this system, the volume of the subwoofer will be controlled by the car audio fader control.*
- *In this system, the output signals to the subwoofer will be the combination of both the REAR L and R INPUT jacks or the REAR high level input connector signals.*

Notas
- *En este sistema, el volumen de los altavoces potenciadores de graves se controla mediante el control de equilibrio entre altavoces del sistema de audio.*
- *En este sistema, las señales de salida que recibe el altavoz potenciador de graves serán la combinación de las tomas REAR L y R INPUT o de las señales del conector de entrada de nivel alto REAR.*

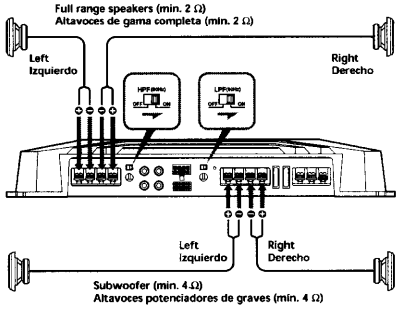
2-Speaker System (with Input Connection B or D)
Sistema de 2 altavoces (con conexión de entrada B o D)

3



2-Way System (with Input Connection A or C)
Sistema de 2 vías (con conexión de entrada A o C)

4

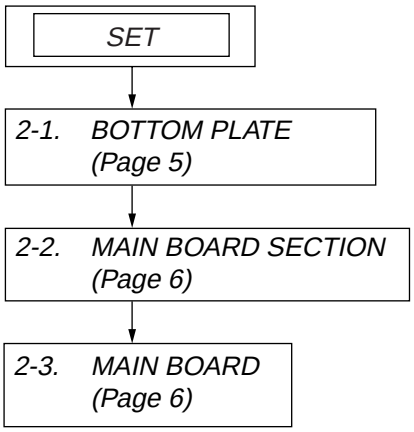


Note
In this system, the volume of the subwoofer will be controlled by the car audio fader control.

Nota
En este sistema, el volumen de los altavoces potenciadores de graves se controla mediante el control de equilibrio entre altavoces del sistema de audio.

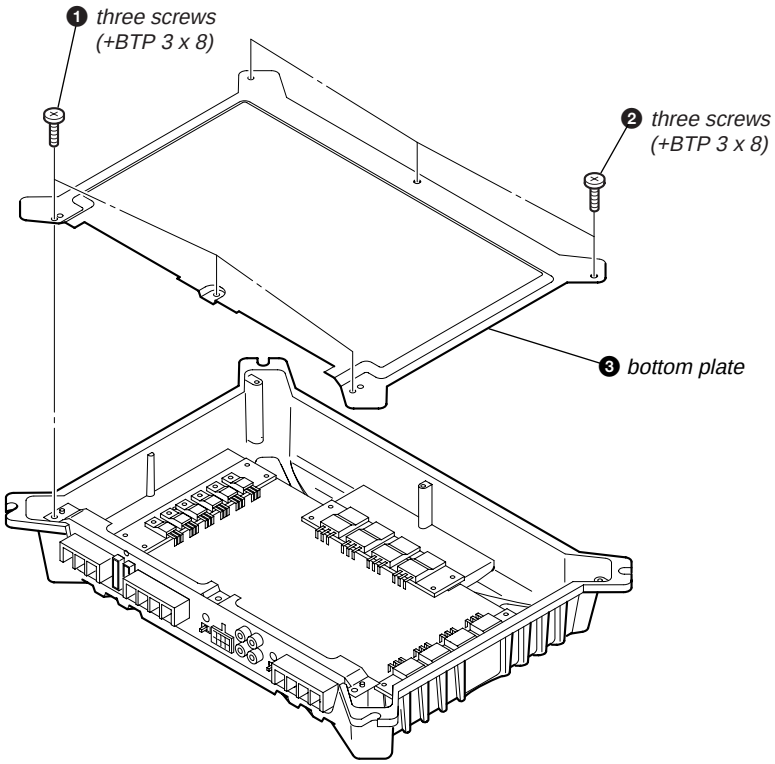
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

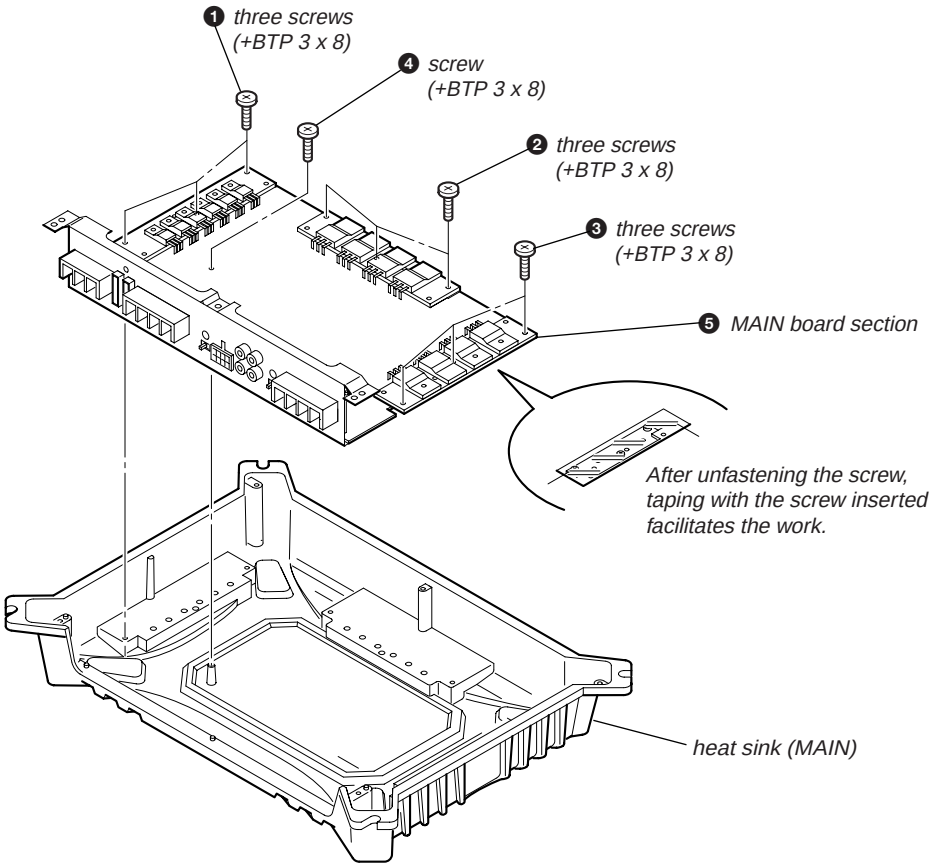


Note : Follow the disassembly procedure in the numerical order given.

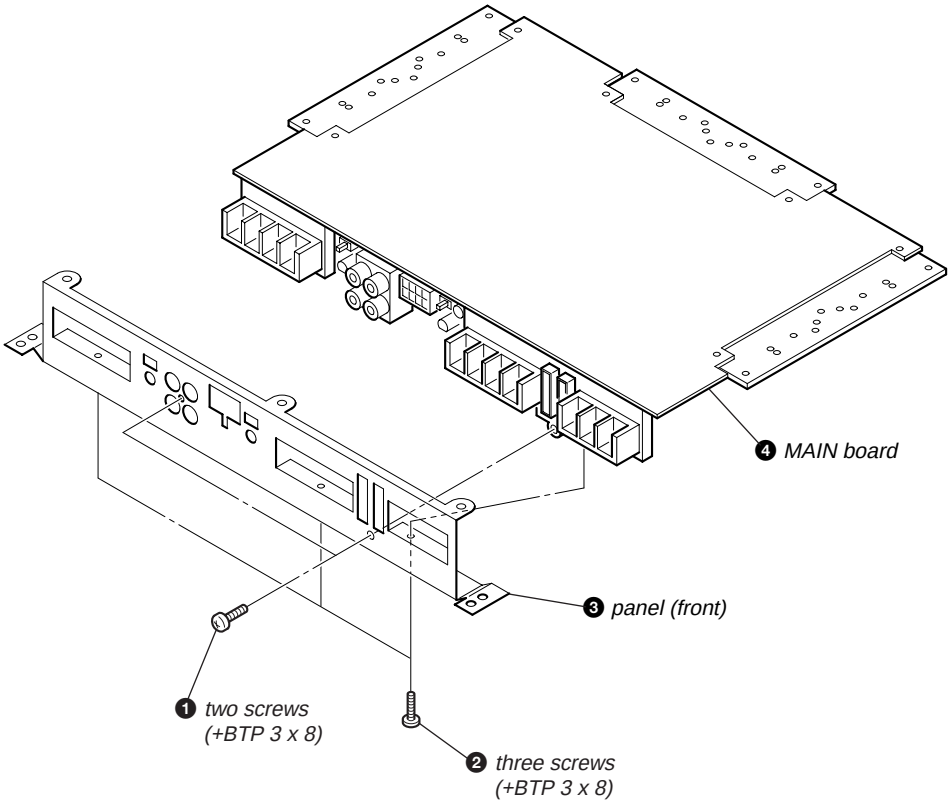
2-1. BOTTOM PLATE



2-2. MAIN BOARD SECTION



2-3. MAIN BOARD



SECTION 3
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

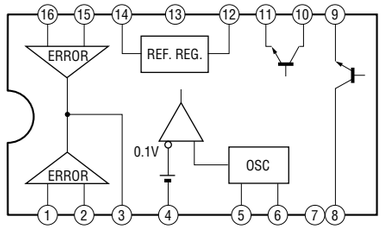
- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from +12V and REM terminals.
- Voltage is dc with respect to ground under no-signal condition.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : AUDIO

for printed wiring boards:

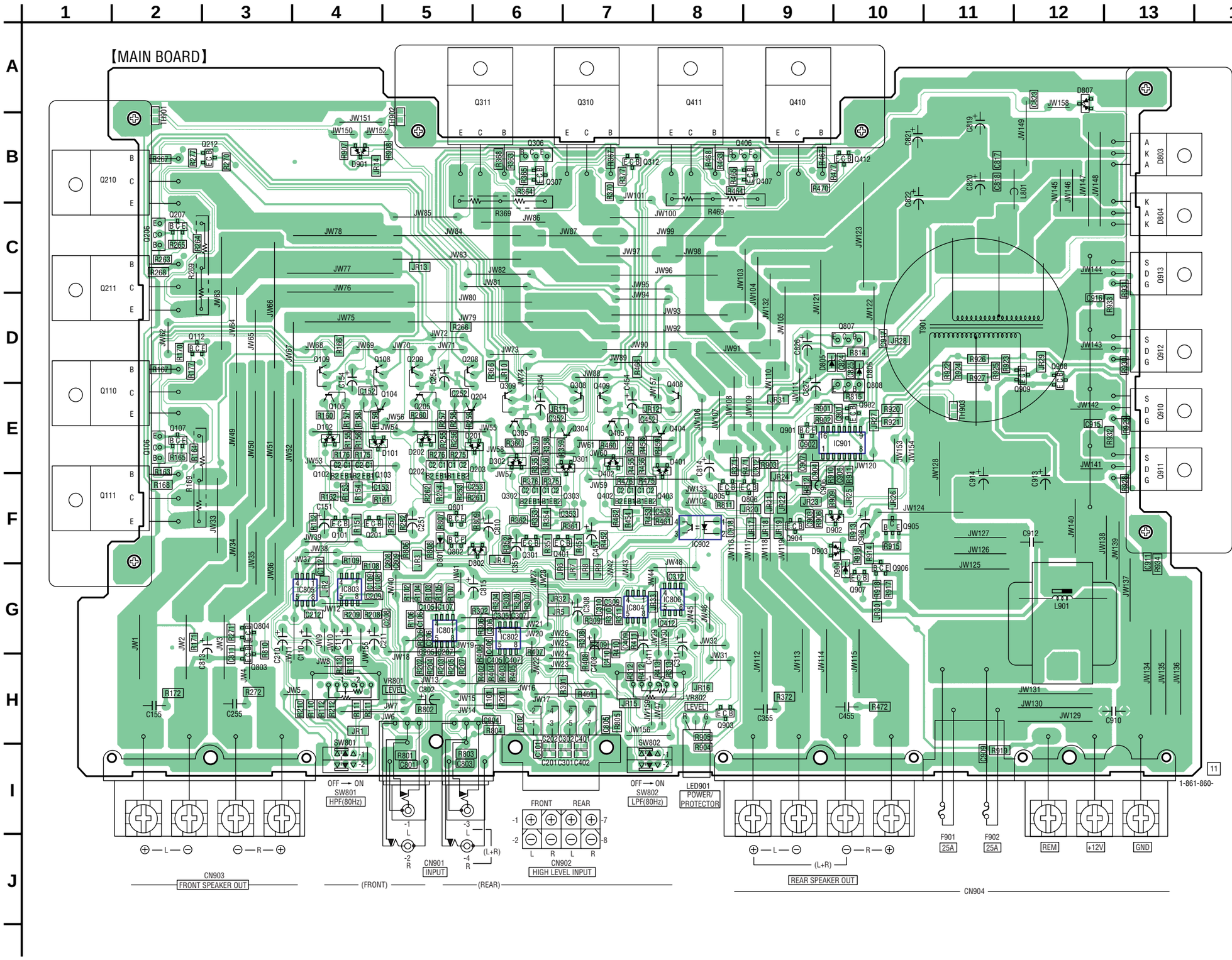
- ▬ : Pattern from the side which enables seeing.

3-1. IC BLOCK DIAGRAM

IC901 µPC494GS



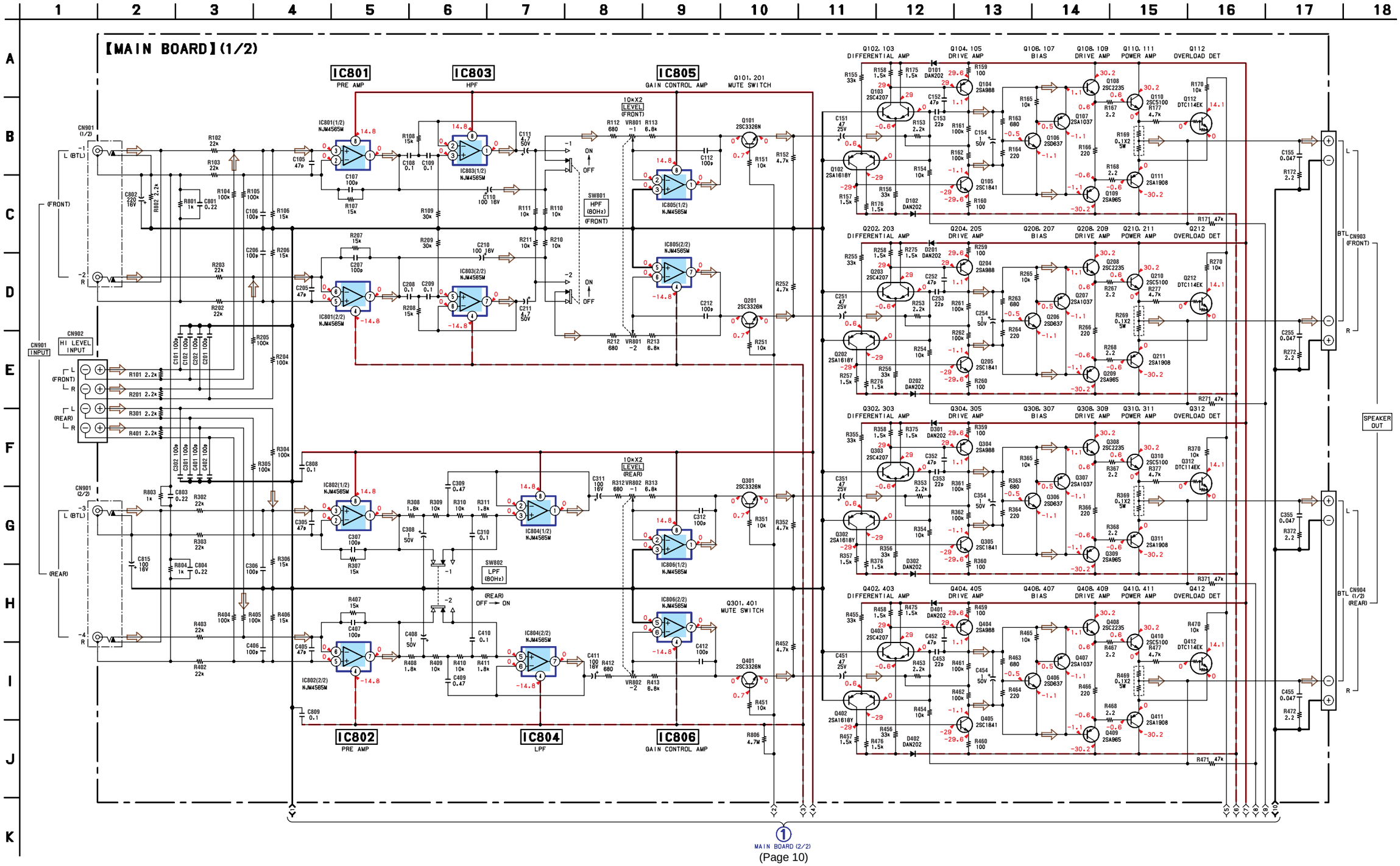
3-2. PRINTED WIRING BOARD • Refer to page 7 for Common Note on Printed Wiring Boards.



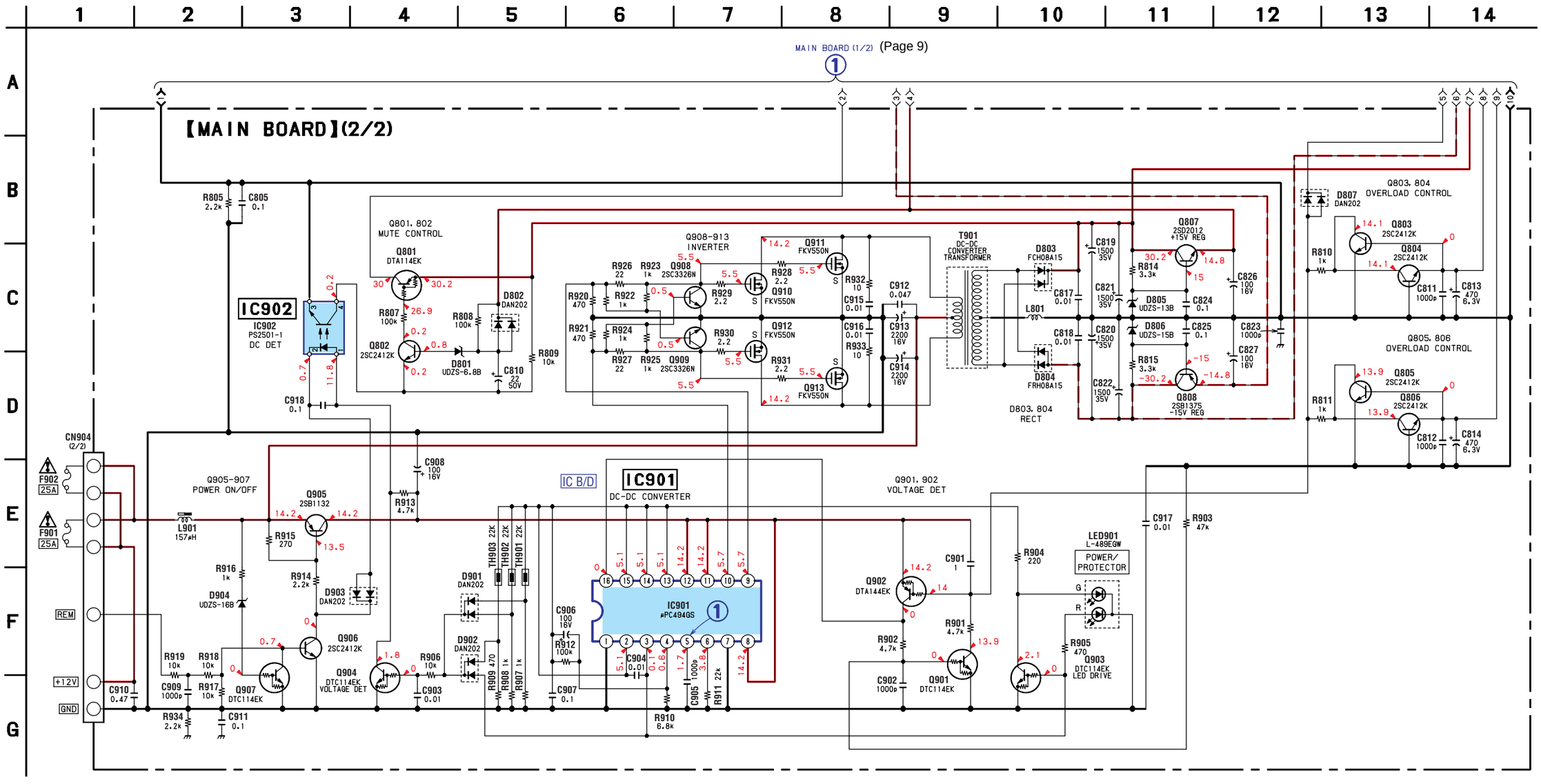
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D101	E-4	Q208	D-5
D102	E-4	Q209	D-5
D201	E-5	Q210	B-1
D202	E-5	Q211	C-1
D301	E-7	Q212	B-3
D302	E-6	Q301	F-6
D401	E-8	Q302	F-6
D402	E-7	Q303	F-7
D801	F-5	Q304	E-7
D802	F-6	Q305	E-6
D803	B-13	Q306	B-6
D804	C-13	Q307	B-6
D805	D-9	Q308	E-7
D806	D-10	Q309	E-6
D807	A-12	Q310	A-7
D901	B-4	Q311	A-6
D902	F-9	Q312	B-7
D903	F-9	Q401	F-7
D904	G-10	Q402	F-7
		Q403	F-8
IC801	G-5	Q404	E-8
IC802	G-6	Q405	E-7
IC803	G-4	Q406	B-9
IC804	G-7	Q407	B-9
IC805	G-4	Q408	E-8
IC806	G-8	Q409	E-7
IC901	E-10	Q410	A-9
IC902	F-8	Q411	A-8
		Q412	B-10
LED901	I-8	Q801	F-5
		Q802	G-3
Q101	F-4	Q803	H-3
Q102	E-4	Q804	G-3
Q103	E-4	Q805	F-8
Q104	E-5	Q806	F-9
Q105	E-4	Q807	D-10
Q106	E-2	Q808	E-10
Q107	E-2	Q901	E-9
Q108	D-5	Q902	E-10
Q109	D-4	Q903	H-8
Q110	F-1	Q904	F-9
Q111	E-1	Q905	F-10
Q112	D-2	Q906	G-10
Q201	F-4	Q907	G-10
Q202	E-5	Q908	D-12
Q203	E-6	Q909	E-12
Q204	E-5	Q910	E-13
Q205	E-5	Q911	E-13
Q206	C-2	Q912	D-13
Q207	C-2	Q913	C-13

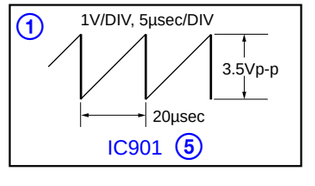
3-3. SCHEMATIC DIAGRAM — AMP SECTION — • Refer to page 7 for Common Note on Schematic Diagrams.



3-4. SCHEMATIC DIAGRAM — POWER SECTION — • Refer to page 7 for IC Block Diagram and Common Note on Schematic Diagrams.



• **Waveform**



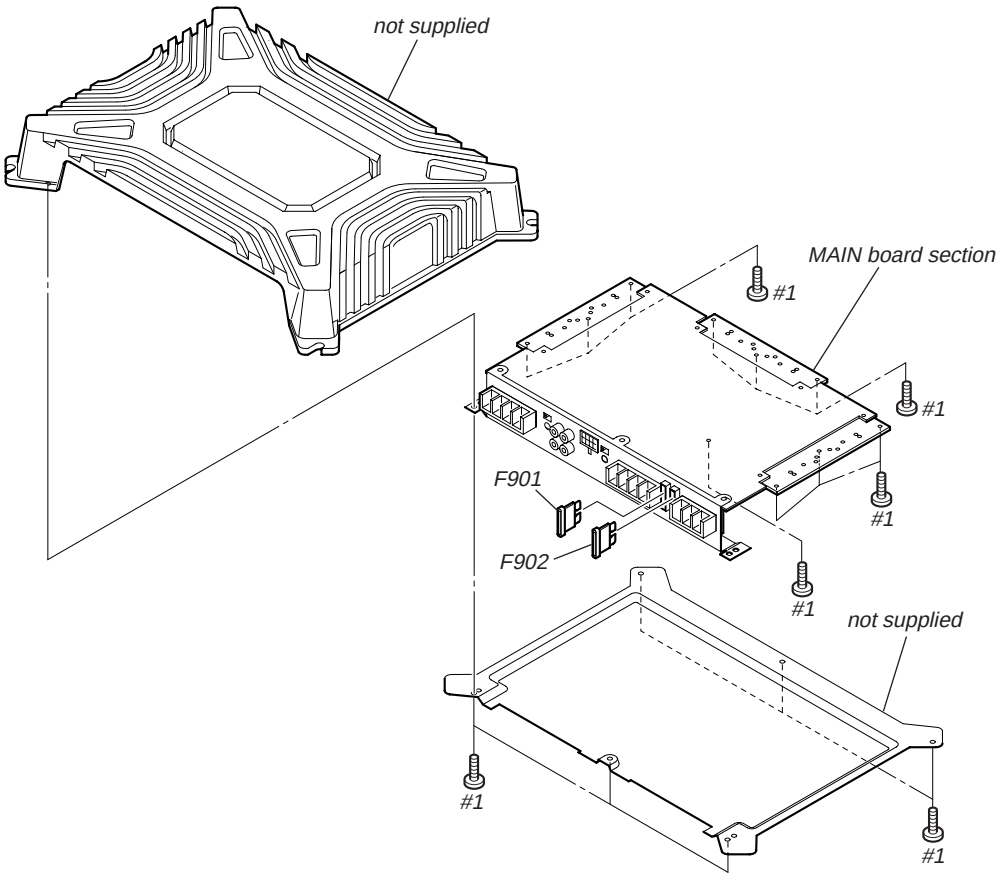
SECTION 4
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  CND : Canadian model
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  Parts Color Cabinet's Color
- Accessories are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

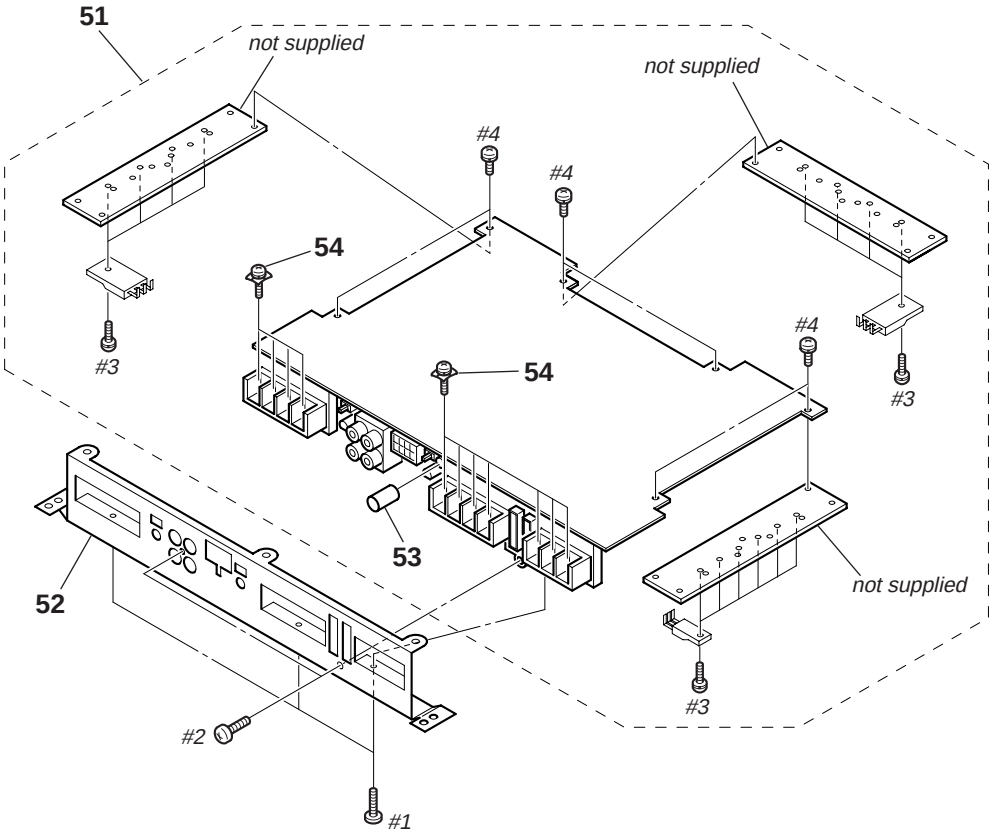
4-1. HEAT SINK (MAIN) SECTION



Ref. No.	Part No.	Description	Remark
⚠F901	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
⚠F902	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	

Ref. No.	Part No.	Description	Remark
#1	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	

4-2. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
51	A-3283-674-A	MAIN BOARD, COMPLETE	
52	3-263-893-01	PANEL (FRONT) (US,CND,E,MX)	
52	3-263-893-11	PANEL (FRONT) (AEP,UK)	
53	3-266-086-01	COVER (LED)	
54	3-912-431-01	SCREW (+–P)	

Ref. No.	Part No.	Description	Remark
#1	7-685-546-14	SCREW +BTP 3X8 TYPE2 N-S	
#2	7-685-546-19	SCREW +BTP 3X8 TYPE2 N-S	
#3	7-682-948-01	SCREW +PSW 3X8	
#4	7-682-648-09	SCREW +PS 3X8	

SECTION 5
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

When indicating parts by reference number, please include the board.

- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
	A-3283-674-A	MAIN BOARD, COMPLETE			
		**********			
	3-266-086-01	COVER (LED)			
	3-912-431-01	SCREW (+–P)			
	7-682-648-09	SCREW +PS 3X8			
	7-682-948-01	SCREW +PSW 3X8			
	7-685-146-14	SCREW +P 3X8 TYPE2 NON-SLIT			
		< CAPACITOR >			
C101	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C102	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C105	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C106	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C107	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C110	1-126-933-11	ELECT	100uF	20%	16V
C111	1-126-963-11	ELECT	4.7uF	20%	50V
C112	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C151	1-126-947-11	ELECT	47uF	20%	25V
C152	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C153	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C154	1-126-960-11	ELECT	1uF	20%	50V
C155	1-104-760-11	MYLAR	0.047uF	10%	50V
C201	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C202	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C205	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C206	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C207	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C208	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C209	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C210	1-126-933-11	ELECT	100uF	20%	16V
C211	1-126-963-11	ELECT	4.7uF	20%	50V
C212	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C251	1-126-947-11	ELECT	47uF	20%	25V
C252	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C253	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C254	1-126-960-11	ELECT	1uF	20%	50V
C255	1-104-760-11	MYLAR	0.047uF	10%	50V
C301	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C302	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C305	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C306	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C307	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C308	1-126-960-11	ELECT	1uF	20%	50V
C309	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C310	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C311	1-126-933-11	ELECT	100uF	20%	16V
C312	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C351	1-126-947-11	ELECT	47uF	20%	25V
C352	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C353	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C354	1-126-960-11	ELECT	1uF	20%	50V
C355	1-104-760-11	MYLAR	0.047uF	10%	50V
C401	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C402	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C405	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C406	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C407	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C408	1-126-960-11	ELECT	1uF	20%	50V
C409	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C410	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C411	1-126-933-11	ELECT	100uF	20%	16V
C412	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C451	1-126-947-11	ELECT	47uF	20%	25V
C452	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C453	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C454	1-126-960-11	ELECT	1uF	20%	50V
C455	1-104-760-11	MYLAR	0.047uF	10%	50V
C801	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C802	1-126-934-11	ELECT	220uF	20%	16V
C803	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C804	1-115-340-11	CERAMIC CHIP	0.22uF	10%	25V
C805	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C808	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C809	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C810	1-126-965-11	ELECT	22uF	20%	50V
C811	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C812	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C813	1-104-655-11	ELECT	470uF	20%	6.3V
C814	1-104-655-11	ELECT	470uF	20%	6.3V
C815	1-126-933-11	ELECT	100uF	20%	16V
C817	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C818	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C819	1-165-949-11	ELECT	1500uF		35V
C820	1-165-949-11	ELECT	1500uF		35V
C821	1-165-949-11	ELECT	1500uF		35V
C822	1-165-949-11	ELECT	1500uF		35V
C823	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C824	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C825	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C826	1-126-933-11	ELECT	100uF	20%	16V
C827	1-126-933-11	ELECT	100uF	20%	16V
C901	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C902	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C903	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C904	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C905	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C906	1-126-933-11	ELECT	100uF	20%	16V
C907	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C908	1-126-933-11	ELECT	100uF	20%	16V
C909	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C910	1-137-380-11	MYLAR	0.47uF	5%	50V
C911	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C912	1-137-374-11	MYLAR	0.047uF	5%	50V
C913	1-131-731-11	ELECT	2200uF	20%	16V
C914	1-131-731-11	ELECT	2200uF	20%	16V
C915	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C916	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C917	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C918	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< JACK >			
CN901	1-779-078-21	JACK, PIN 4P (INPUT (FRONT/REAR))			
		< CONNECTOR >			
CN902	1-580-283-11	PIN, CONNECTOR (PC BOARD) 8P (HIGH LEVEL INPUT)			
		< TERMINAL BOARD >			
CN903	1-780-132-11	TERMINAL BOARD (4P) (FRONT SPEAKER OUT)			
CN904	1-780-134-11	TERMINAL BOARD (4P+3P+FUSE) (REM,+12V, GND,REAR SPEAKER OUT,25A)			
		< DIODE >			
D101	8-719-801-78	DIODE 1SS184			
D102	8-719-801-78	DIODE 1SS184			
D201	8-719-801-78	DIODE 1SS184			
D202	8-719-801-78	DIODE 1SS184			
D301	8-719-801-78	DIODE 1SS184			
D302	8-719-801-78	DIODE 1SS184			
D401	8-719-801-78	DIODE 1SS184			
D402	8-719-801-78	DIODE 1SS184			
D801	8-719-025-34	DIODE 02CZ6.8-TE85L			
D802	8-719-801-78	DIODE 1SS184			
D803	6-500-209-01	DIODE FCH08A15			
D804	6-500-210-01	DIODE FRH08A15			
D805	8-719-025-48	DIODE 02CZ13-TE85L			
D806	8-719-025-49	DIODE 02CZ15-TE85L			
D807	8-719-801-78	DIODE 1SS184			
D901	8-719-801-78	DIODE 1SS184			
D902	8-719-801-78	DIODE 1SS184			
D903	8-719-801-78	DIODE 1SS184			
D904	8-719-025-50	DIODE 02CZ16-TE85L			

Ref. No.	Part No.	Description	Remark
		< IC >	
IC801	8-759-710-28	IC NJM4565M-A	
IC802	8-759-710-28	IC NJM4565M-A	
IC803	8-759-710-28	IC NJM4565M-A	
IC804	8-759-710-28	IC NJM4565M-A	
IC805	8-759-710-28	IC NJM4565M-A	
IC806	8-759-710-28	IC NJM4565M-A	
IC901	8-759-144-88	IC uPC494GS	
		< PHOTO COUPLER >	
IC902	8-719-156-72	PHOTO COUPLER PS2501-1-K	
		< JUMPER RESISTOR >	
JR1	1-216-296-11	SHORT CHIP 0	
JR2	1-216-296-11	SHORT CHIP 0	
JR3	1-216-296-11	SHORT CHIP 0	
JR4	1-216-296-11	SHORT CHIP 0	
JR5	1-216-296-11	SHORT CHIP 0	
JR6	1-216-296-11	SHORT CHIP 0	
JR7	1-216-296-11	SHORT CHIP 0	
JR8	1-216-296-11	SHORT CHIP 0	
JR9	1-216-296-11	SHORT CHIP 0	
JR10	1-216-296-11	SHORT CHIP 0	
JR11	1-216-295-11	SHORT CHIP 0	
JR12	1-216-295-11	SHORT CHIP 0	
JR13	1-216-296-11	SHORT CHIP 0	
JR14	1-216-296-11	SHORT CHIP 0	
JR15	1-216-296-11	SHORT CHIP 0	
JR16	1-216-296-11	SHORT CHIP 0	
JR17	1-216-296-11	SHORT CHIP 0	
JR18	1-216-296-11	SHORT CHIP 0	
JR19	1-216-296-11	SHORT CHIP 0	
JR20	1-216-296-11	SHORT CHIP 0	
JR21	1-216-296-11	SHORT CHIP 0	
JR22	1-216-296-11	SHORT CHIP 0	
JR23	1-216-296-11	SHORT CHIP 0	
JR24	1-216-296-11	SHORT CHIP 0	
JR25	1-216-296-11	SHORT CHIP 0	
JR26	1-216-296-11	SHORT CHIP 0	
JR27	1-216-296-11	SHORT CHIP 0	
JR28	1-216-296-11	SHORT CHIP 0	
JR29	1-216-296-11	SHORT CHIP 0	
JR30	1-216-296-11	SHORT CHIP 0	
JR31	1-216-296-11	SHORT CHIP 0	
JR32	1-216-296-11	SHORT CHIP 0	
JR33	1-216-296-11	SHORT CHIP 0	
		< COIL >	
L801	1-410-396-41	INDUCTOR, FERRITE BEAD 0.45uH	
L901	1-411-756-11	INDUCTOR	
		< DIODE >	
LED901	8-719-076-62	LED GL5ED60 (POWER/PROTECTOR)	
		< TRANSISTOR >	
Q101	8-729-202-38	TRANSISTOR 2SC3326N-A	

Ref. No.	Part No.	Description	Remark
Q102	8-729-232-66	TRANSISTOR 2SA1618Y	
Q103	8-729-014-86	TRANSISTOR 2SC4207-YGR-TE85L	
Q104	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q105	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q106	8-729-902-11	TRANSISTOR 2SC2021-Q	
Q107	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q108	8-729-020-80	TRANSISTOR 2SC2235-O/Y(TPE6)	
Q109	8-729-232-32	TRANSISTOR 2SA965	
Q110	8-729-024-79	TRANSISTOR 2SC5100-P	
Q111	8-729-024-76	TRANSISTOR 2SA1908-P	
Q112	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q201	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q202	8-729-232-66	TRANSISTOR 2SA1618Y	
Q203	8-729-014-86	TRANSISTOR 2SC4207-YGR-TE85L	
Q204	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q205	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q206	8-729-902-11	TRANSISTOR 2SC2021-Q	
Q207	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q208	8-729-020-80	TRANSISTOR 2SC2235-O/Y(TPE6)	
Q209	8-729-232-32	TRANSISTOR 2SA965	
Q210	8-729-024-79	TRANSISTOR 2SC5100-P	
Q211	8-729-024-76	TRANSISTOR 2SA1908-P	
Q212	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q301	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q302	8-729-232-66	TRANSISTOR 2SA1618Y	
Q303	8-729-014-86	TRANSISTOR 2SC4207-YGR-TE85L	
Q304	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q305	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q306	8-729-902-11	TRANSISTOR 2SC2021-Q	
Q307	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q308	8-729-020-80	TRANSISTOR 2SC2235-O/Y(TPE6)	
Q309	8-729-232-32	TRANSISTOR 2SA965	
Q310	8-729-024-79	TRANSISTOR 2SC5100-P	
Q311	8-729-024-76	TRANSISTOR 2SA1908-P	
Q312	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q401	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q402	8-729-232-66	TRANSISTOR 2SA1618Y	
Q403	8-729-014-86	TRANSISTOR 2SC4207-YGR-TE85L	
Q404	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q405	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q406	8-729-902-11	TRANSISTOR 2SC2021-Q	
Q407	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q408	8-729-020-80	TRANSISTOR 2SC2235-O/Y(TPE6)	
Q409	8-729-232-32	TRANSISTOR 2SA965	
Q410	8-729-024-79	TRANSISTOR 2SC5100-P	
Q411	8-729-024-76	TRANSISTOR 2SA1908-P	
Q412	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q801	8-729-901-04	TRANSISTOR DTA114EK	
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q803	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q804	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q805	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q806	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q807	8-729-209-15	TRANSISTOR 2SD2012	
Q808	8-729-209-60	TRANSISTOR 2SB1375	
Q901	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q902	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q903	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q904	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q905	8-729-106-60	TRANSISTOR 2SB1115A	
Q906	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q907	8-729-027-43	TRANSISTOR DTC114EKA-T146	
Q908	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q909	8-729-202-38	TRANSISTOR 2SC3326N-A	
Q910	6-550-341-01	FET FKV550N	
Q911	6-550-341-01	FET FKV550N	
Q912	6-550-341-01	FET FKV550N	
Q913	6-550-341-01	FET FKV550N	

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R101	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R102	1-216-081-00	METAL CHIP	22K	5%	1/10W
R103	1-216-081-00	METAL CHIP	22K	5%	1/10W
R104	1-216-097-11	RES-CHIP	100K	5%	1/10W
R105	1-216-097-11	RES-CHIP	100K	5%	1/10W
R106	1-216-077-11	RES-CHIP	15K	5%	1/10W
R107	1-216-077-11	RES-CHIP	15K	5%	1/10W
R108	1-216-077-11	RES-CHIP	15K	5%	1/10W
R109	1-216-084-00	METAL CHIP	30K	5%	1/10W
R110	1-216-073-00	RES-CHIP	10K	5%	1/10W
R111	1-216-073-00	RES-CHIP	10K	5%	1/10W
R112	1-216-045-00	METAL CHIP	680	5%	1/10W
R113	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R151	1-216-222-00	RES-CHIP	10K	5%	1/8W
R152	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R153	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R154	1-216-222-00	RES-CHIP	10K	5%	1/8W
R155	1-216-085-11	RES-CHIP	33K	5%	1/10W
R156	1-216-085-11	RES-CHIP	33K	5%	1/10W
R157	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R158	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R159	1-216-025-11	RES-CHIP	100	5%	1/10W
R160	1-216-025-11	RES-CHIP	100	5%	1/10W
R161	1-216-097-11	RES-CHIP	100K	5%	1/10W
R162	1-216-097-11	RES-CHIP	100K	5%	1/10W
R163	1-216-045-00	METAL CHIP	680	5%	1/10W
R164	1-216-033-00	METAL CHIP	220	5%	1/10W
R165	1-216-073-00	RES-CHIP	10K	5%	1/10W
R166	1-216-182-00	RES-CHIP	220	5%	1/8W
R167	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R168	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R169	1-205-991-11	METAL	0.1X2	10%	5W F
R170	1-216-073-00	RES-CHIP	10K	5%	1/10W
R171	1-216-089-11	RES-CHIP	47K	5%	1/10W
R172	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R175	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R176	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R177	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R201	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R202	1-216-081-00	METAL CHIP	22K	5%	1/10W
R203	1-216-081-00	METAL CHIP	22K	5%	1/10W
R204	1-216-097-11	RES-CHIP	100K	5%	1/10W
R205	1-216-097-11	RES-CHIP	100K	5%	1/10W
R206	1-216-077-11	RES-CHIP	15K	5%	1/10W
R207	1-216-077-11	RES-CHIP	15K	5%	1/10W
R208	1-216-077-11	RES-CHIP	15K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R209	1-216-084-00	METAL CHIP	30K	5%	1/10W
R210	1-216-073-00	RES-CHIP	10K	5%	1/10W
R211	1-216-073-00	RES-CHIP	10K	5%	1/10W
R212	1-216-045-00	METAL CHIP	680	5%	1/10W
R213	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R251	1-216-222-00	RES-CHIP	10K	5%	1/8W
R252	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R253	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R254	1-216-222-00	RES-CHIP	10K	5%	1/8W
R255	1-216-085-11	RES-CHIP	33K	5%	1/10W
R256	1-216-085-11	RES-CHIP	33K	5%	1/10W
R257	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R258	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R259	1-216-025-11	RES-CHIP	100	5%	1/10W
R260	1-216-025-11	RES-CHIP	100	5%	1/10W
R261	1-216-097-11	RES-CHIP	100K	5%	1/10W
R262	1-216-097-11	RES-CHIP	100K	5%	1/10W
R263	1-216-045-00	METAL CHIP	680	5%	1/10W
R264	1-216-033-00	METAL CHIP	220	5%	1/10W
R265	1-216-073-00	RES-CHIP	10K	5%	1/10W
R266	1-216-182-00	RES-CHIP	220	5%	1/8W
R267	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R268	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R269	1-205-991-11	METAL	0.1X2	10%	5W F
R270	1-216-073-00	RES-CHIP	10K	5%	1/10W
R271	1-216-089-11	RES-CHIP	47K	5%	1/10W
R272	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R275	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R276	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R277	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R301	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R302	1-216-081-00	METAL CHIP	22K	5%	1/10W
R303	1-216-081-00	METAL CHIP	22K	5%	1/10W
R304	1-216-097-11	RES-CHIP	100K	5%	1/10W
R305	1-216-097-11	RES-CHIP	100K	5%	1/10W
R306	1-216-077-11	RES-CHIP	15K	5%	1/10W
R307	1-216-077-11	RES-CHIP	15K	5%	1/10W
R308	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R309	1-216-084-00	METAL CHIP	30K	5%	1/10W
R310	1-216-073-00	RES-CHIP	10K	5%	1/10W
R311	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R312	1-216-045-00	METAL CHIP	680	5%	1/10W
R313	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R351	1-216-222-00	RES-CHIP	10K	5%	1/8W
R352	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R353	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R354	1-216-222-00	RES-CHIP	10K	5%	1/8W
R355	1-216-085-11	RES-CHIP	33K	5%	1/10W
R356	1-216-085-11	RES-CHIP	33K	5%	1/10W
R357	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R358	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R359	1-216-025-11	RES-CHIP	100	5%	1/10W
R360	1-216-025-11	RES-CHIP	100	5%	1/10W
R361	1-216-097-11	RES-CHIP	100K	5%	1/10W
R362	1-216-097-11	RES-CHIP	100K	5%	1/10W
R363	1-216-045-00	METAL CHIP	680	5%	1/10W
R364	1-216-033-00	METAL CHIP	220	5%	1/10W
R365	1-216-073-00	RES-CHIP	10K	5%	1/10W
R366	1-216-182-00	RES-CHIP	220	5%	1/8W
R367	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R368	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R369	1-205-991-11	METAL	0.1X2	10%	5W F
R370	1-216-073-00	RES-CHIP	10K	5%	1/10W
R371	1-216-089-11	RES-CHIP	47K	5%	1/10W
R372	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R375	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R376	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R377	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R401	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R402	1-216-081-00	METAL CHIP	22K	5%	1/10W
R403	1-216-081-00	METAL CHIP	22K	5%	1/10W
R404	1-216-097-11	RES-CHIP	100K	5%	1/10W
R405	1-216-097-11	RES-CHIP	100K	5%	1/10W
R406	1-216-077-11	RES-CHIP	15K	5%	1/10W
R407	1-216-077-11	RES-CHIP	15K	5%	1/10W
R408	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R409	1-216-084-00	METAL CHIP	30K	5%	1/10W
R410	1-216-073-00	RES-CHIP	10K	5%	1/10W
R411	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R412	1-216-045-00	METAL CHIP	680	5%	1/10W
R413	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R451	1-216-222-00	RES-CHIP	10K	5%	1/8W
R452	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R453	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R454	1-216-222-00	RES-CHIP	10K	5%	1/8W
R455	1-216-085-11	RES-CHIP	33K	5%	1/10W
R456	1-216-085-11	RES-CHIP	33K	5%	1/10W
R457	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R458	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R459	1-216-025-11	RES-CHIP	100	5%	1/10W
R460	1-216-025-11	RES-CHIP	100	5%	1/10W
R461	1-216-097-11	RES-CHIP	100K	5%	1/10W
R462	1-216-097-11	RES-CHIP	100K	5%	1/10W
R463	1-216-045-00	METAL CHIP	680	5%	1/10W
R464	1-216-033-00	METAL CHIP	220	5%	1/10W
R465	1-216-073-00	RES-CHIP	10K	5%	1/10W
R466	1-216-182-00	RES-CHIP	220	5%	1/8W
R467	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R468	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R469	1-205-991-11	METAL	0.1X2	10%	5W F
R470	1-216-073-00	RES-CHIP	10K	5%	1/10W
R471	1-216-089-11	RES-CHIP	47K	5%	1/10W
R472	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R475	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R476	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R477	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R801	1-216-198-11	RES-CHIP	1K	5%	1/8W
R802	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R803	1-216-198-11	RES-CHIP	1K	5%	1/8W
R804	1-216-198-11	RES-CHIP	1K	5%	1/8W
R805	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R806	1-208-291-11	RES-CHIP	4.7M	5%	1/10W
R807	1-216-097-11	RES-CHIP	100K	5%	1/10W
R808	1-216-097-11	RES-CHIP	100K	5%	1/10W
R809	1-216-222-00	RES-CHIP	10K	5%	1/8W
R810	1-216-049-11	RES-CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R811	1-216-049-11	RES-CHIP	1K	5%	1/10W
R814	1-216-210-00	RES-CHIP	3.3K	5%	1/8W
R815	1-216-210-00	RES-CHIP	3.3K	5%	1/8W
R901	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R902	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R903	1-216-089-11	RES-CHIP	47K	5%	1/10W
R904	1-216-033-00	METAL CHIP	220	5%	1/10W
R905	1-216-041-00	METAL CHIP	470	5%	1/10W
R906	1-216-073-00	RES-CHIP	10K	5%	1/10W
R907	1-216-049-11	RES-CHIP	1K	5%	1/10W
R908	1-216-049-11	RES-CHIP	1K	5%	1/10W
R909	1-216-041-00	METAL CHIP	470	5%	1/10W
R910	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R911	1-216-081-00	METAL CHIP	22K	5%	1/10W
R912	1-216-097-11	RES-CHIP	100K	5%	1/10W
R913	1-216-065-00	RES-CHIP	4.7K	5%	1/10W
R914	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
R915	1-216-035-00	METAL CHIP	270	5%	1/10W
R916	1-216-049-11	RES-CHIP	1K	5%	1/10W
R917	1-216-073-00	RES-CHIP	10K	5%	1/10W
R918	1-216-073-00	RES-CHIP	10K	5%	1/10W
R919	1-216-222-00	RES-CHIP	10K	5%	1/8W
R920	1-216-190-00	RES-CHIP	470	5%	1/8W
R921	1-216-190-00	RES-CHIP	470	5%	1/8W
R922	1-216-049-11	RES-CHIP	1K	5%	1/10W
R923	1-216-049-11	RES-CHIP	1K	5%	1/10W
R924	1-216-049-11	RES-CHIP	1K	5%	1/10W
R925	1-216-049-11	RES-CHIP	1K	5%	1/10W
R926	1-216-158-00	RES-CHIP	22	5%	1/8W
R927	1-216-158-00	RES-CHIP	22	5%	1/8W
R928	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R929	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R930	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R931	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R932	1-216-150-00	RES-CHIP	10	5%	1/8W
R933	1-216-150-00	RES-CHIP	10	5%	1/8W
R934	1-216-206-00	RES-CHIP	2.2K	5%	1/8W
		< SWITCH >			
SW801	1-571-478-11	SWITCH, SLIDE (HPF(80Hz) (FRONT))			
SW802	1-571-478-11	SWITCH, SLIDE (LPF(80Hz) (REAR))			
		< TRANSFORMER >			
T901	1-443-277-11	TRANSFORMER, DC-DC CONVERTER			
		< THERMISTOR (POSITIVE) >			
TH901	1-810-506-11	THERMISTOR NTH5G39B223K01			
TH902	1-810-506-11	THERMISTOR NTH5G39B223K01			
TH903	1-810-506-11	THERMISTOR NTH5G39B223K01			
		< VARIABLE RESISTOR >			
VR801	1-225-459-11	RES, VAR, CARBON 10KX2 (LEVEL (FRONT))			
VR802	1-225-459-11	RES, VAR, CARBON 10KX2 (LEVEL (REAR))			

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
⚠F901	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	
⚠F902	1-576-256-11	FUSE (BLADE TYPE) (AUTO FUSE) (25A)	

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		ACCESSORIES	
		**********	
	3-263-283-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH)	(US,CND)
	3-263-283-21	MANUAL, INSTRUCTION (ENGLISH,SPANISH,	TRADITIONAL CHINESE) (AEP,UK,E,MX)
	3-263-283-31	MANUAL, INSTRUCTION (GERMAN,FRENCH,	ITALIAN) (AEP,UK)
	3-263-283-41	MANUAL, INSTRUCTION (DUTCH,RUSSIAN,	SWEDISH) (AEP,UK)
	3-263-283-51	MANUAL, INSTRUCTION (GREEK,POLISH,	PORTUGUESE) (AEP,UK)

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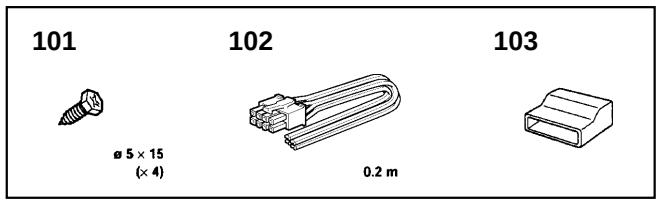
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
101	3-367-410-01	SCREW (DIA.5X15), TAPPING	(MOUNTING SCREW)
102	1-823-952-11	CORD (WITH CONNECTOR) 8P (0.2m)	
103	3-263-276-01	COVER (POWER)	



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004. 01	New